

<p>DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Housing—Federal Housing Commissioner</p> <p>TO: DIRECTOR, HOUSING DIVISION DIRECTOR, MULTIFAMILY DIVISION DIRECTOR, SINGLE FAMILY DIVISION</p>	<p>STRUCTURAL ENGINEERING BULLETIN NO. 789 Rev. 6 (Supersedes issue dated November 30, 1993)</p> <hr/> <p>ISSUE DATE: January 8, 1997</p> <hr/> <p>REVIEW DATE: January 8, 2000</p>
<p>SUBJECT: 1. Item Description Shop Fabricated Wood Frame Modular Dwellings Units</p> <p>2. Name and address New England Homes, Inc. of Manufacturer 270 Ocean Road Greenland, NH 03840</p>	

This Structural Engineering Bulletin (SEB) should be filed with other SEBs and related bulletins on materials or products as required by prescribed procedures.

The technical description, requirements and limitations expressed herein do not constitute an endorsement or approval by the Department of Housing and Urban Development (HUD) of the subject matter, and any statement or representation, however made, indicating approval or endorsement by HUD is unauthorized and false, and will be considered a violation of the United States Criminal Code, 18 U.S.C. 709.

NOTICE: THIS BULLETIN APPLIES TO DWELLING UNITS BUILT UNDER HUD HOUSING PROGRAMS. NON-HUD INSURED UNITS MAY OR MAY NOT BE IN CONFORMITY WITH THE REQUIREMENTS OF THE HUD MINIMUM PROPERTY STANDARDS.

Any reproduction of this Bulletin must be in its entirety and any use of all or any part of this Bulletin in sales promotion or advertising is prohibited.

1. General:

This Bulletin sets forth specific requirements under the Technical Suitability of Products Program for determining the eligibility of housing to be constructed under HUD mortgage insurance or other HUD housing programs.

2. Scope:

This Bulletin applies only to the structural features of this method of construction. Final determination of eligibility is made by the appropriate HUD Field Office. Other factors considered by the Field Office will be valuation, location, architectural planning and appeal, mechanical equipment, thermal characteristics, and market acceptance. Consideration is also necessary to determine whether a specific property will qualify under the specific HUD program when constructed according to the method outlined in this Bulletin and where the structure is to be located.

In geographical areas subject to hurricanes, earthquakes, or other severe conditions affecting dwelling structures, the HUD Field Office shall require additional safeguards in proposed designs, when necessary.

3. Minimum Property Standards (MPS):

Compliance with HUD MPS will be determined by the HUD Field Office on the same basis as submissions involving conventional construction, except for the special features described in this Bulletin.

4. Inspection:

Field compliance inspections covering conventional items of construction and any special features covered in this Bulletin shall be made in accordance with prescribed procedures.

The appropriate HUD Field Office shall furnish a copy of a HUD field inspection report to Headquarters, Manufactured Housing and Standards Division, Office of Consumer and Regulatory Affairs, when there is:

- a. Evidence of noncompliance with any portion of the system of construction described in this Bulletin.
- b. Faulty shop fabrication, including significant surface defects.
- c. Damage to shop fabricated items or materials due to improper transportation, storage, handling, or assembly.
- d. Unsatisfactory field workmanship or performance of the product or system.
- e. Any significant degradation or deterioration of the product or evidence of lack of durability or performance.

Periodic plant inspections will be made by HUD Field Office personnel in accordance with prescribed procedures. Factory inspection reports shall be submitted to HUD Headquarters, upon request.

5. Certification:

The company named in this Bulletin shall furnish the builder with a written certification stating that the product has been manufactured in compliance with the HUD Minimum Property Standards, except as modified by this Bulletin. The builder shall endorse the certification with a statement that the product has been erected in compliance with HUD MPS, except as modified by this Bulletin, and that the manufacturer's certification does not relieve the builder, in any way, of responsibility under the terms of the Builder's Warranty required by the National Housing Act, or under any provisions applicable to any other housing program. This certification shall be furnished to the HUD Field Office upon completion of the property.

OUTLINE DESCRIPTION, CATEGORY I CONSTRUCTION:

GENERAL:

Completely shop fabricated wood frame modular dwelling units, from 12, 13 and 14 feet wide and up to 60 feet in length, are furnished in this method of construction. Units are factory finished on both the interior and the exterior. Units are transported to the building site, where they are set on conventional foundations and joined together.

Construction is basically of conventional wood framing which may include various types of interior and exterior finish materials. All materials and methods of installation shall be in accordance with HUD Minimum Property Standards, Use of Materials Bulletins (UM) and Materials Releases (MR), except as may be specifically noted herein. Plumbing, heating and electrical systems are shop installed and field connected.

This Bulletin is based on a structural review of the Two-and Three-Bedroom models of the New England Homes, Inc. (the Manufacturer), but may be considered applicable to all structurally similar units of this company. Foundation design and nonstructural items (such as architectural, plumbing, heating and electrical features) are not covered by this Bulletin.

SPECIFICATIONS:

Form HUD-92005, "Description of Materials" specifying only the structurally related items (Nos. 1 to 12, 14, 26 and 27), as originally submitted for technical suitability determination, describes the materials that shall be used in construction of housing units under this system of construction. Form HUD-92005, furnished with each application for use under HUD housing programs, shall include as a minimum the same structural materials.

DRAWINGS:

The following drawings by New England Homes, Inc., shall be considered an integral part of this Bulletin:

<u>Drawing No.</u>	<u>Date</u>	<u>Release Code</u>	<u>Description</u>
E.01.FF	1988	(88.0)	Elevations
S-24.54	1988	(88.0)	4-Box Sections (Flush Front)
F	1988	(88.0)	Cover Sheet-Foundations
F.01	1988	(88.0)	Typical Foundation
F.02	1988	(88.0)	Foundation Details
C4	1988	(88.0)	Cover Sheet-Stair Components
C4.61.3	1988	(88.0)	Stair Components
C4.65.3	1988	(88.0)	Stair Components
C5	1988	(88.0)	Cover Sheet-Floor Systems
C5.01	1988	(88.0)	First Floor Deck Framing
C5.02	1988	(88.0)	Second Floor Deck Framing
C5.03	1988	(88.0)	Support Column Location and Grit Cutting Lists
C6	1988	(88.0)	Cover Sheet-Wall Systems
C6.01.01	1988	(88.0)	Front & Rear Wall Framing Layouts
C6.02.01	1988	(88.0)	Marriage Wall Framing Layouts
C6.03.01	1988	(88.0)	Gable Endwall Framing Layouts
C6.04.01	1988	(88.0)	Stubwall Framing Layouts
C6.05.01	1988	(88.0)	Interior Partition Framing Layouts
C7	1988	(88.0)	Cover Sheet - Ceiling Systems
C7.01	1988	(88.0)	Ceiling Framing
C7.02	1988	(88.0)	Framing Details-Combination Floor/Ceiling Framing
R	1988	(88.0)	Cover Sheet Roof Systems
R0.01.01	1988	(88.0)	Roof Details
R0.01.02	1988	(88.0)	Roof Details
R2.15.59	1988	(88.0)	10/12 Ell w/Porch Rafters-all widths
R5.44.39	1988	(88.0)	14' wide - 5 1/2 Pitch Roof Truss

A	1988	(88.0)	Cover Sheet - Schedule
A1.01	1988	(88.0)	Framing-Schedules and Details
A1.02	1988	(88.0)	Framing-Schedules and Information
A2.01	1988	(88.0)	Header Schedule and Details
A2.02	1988	(88.0)	Span-Beam-Schedule and Details
A9.01	1988	(88.0)	Fastening Schedule
A9.02	1988	(88.0)	Sheathing Gypsum Board and Miscellaneous Fastening

The Builder shall submit construction drawings to the HUD Field Office with each application under HUD housing programs, which shall include the same or similar structural features as shown on the drawings listed above. Copies of these listed drawings shall also be furnished to the HUD Field Office by the Builder upon request.

DESIGN AND CONSTRUCTION REQUIREMENTS:

Design Loads: The method described in this Bulletin is based on maximum design loads of 40 psf for snow, Seismic Zone 2 and a Basic Wind Speed of 80 mph and Exposure C (American Society of Civil Engineers Standard 7-88). The Builder shall submit structural calculations to the local HUD Office if housing units are to be located in geographical areas where these conditions are exceeded.

Framing of Loadbearing Walls: Wood-to-wood connections shall be provided between bearing walls and roof/ceiling or floor construction. Floor covering, including carpeting and vinyl tile, shall not be continued under loadbearing walls.

Roof Construction: Trussed rafters shall be designed and constructed in accordance with ANSI/TPI 1-1995 Standard (American National Standards Institute and Truss Plate Institute), "Design Specification for Metal Plate Connected Wood Construction."

MANUFACTURING PLANT:

Housing units covered under this Bulletin will be produced in the following plant:

New England Homes, Inc.
2760 Ocean Road
Greenland, NH 03840

The State of New Hampshire will inspect this plant in accordance with their prescribed procedures.